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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,811	10/11/2005	Johannes Baier	DE030105US1	5539
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EXAMINER SANEI, HANA ASMAT				
ART UNIT 2889		PAPER NUMBER		
MAIL DATE 02/08/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,811

Applicant(s)

BAIER ET AL.

Examiner

HANA A. SANEI

Art Unit

2889

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-8 is/are rejected.
- 7) ☒ Claim(s) 3-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)
- Paper No(s)/Mail Date 8/24/07
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The Amendment, filed on 11/20/07, has been entered and acknowledged by the Examiner.

Claim(s) 1-8 are pending in the instant application.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claim 1 is objected to because of the following informalities: The phrase "further halogenides" lacks proper antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim(s) 1-2, 6, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by English et al (US 4766348).

Regarding Claim 1, English teaches a filling (7, "elliptical-shaped interior portion," See at least Fig. 1), wherein the filling includes zinc, a halogen and a rare gas (Ar, Col. 3, lines 45-46), wherein at least a portion of the zinc and at least a portion of the

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halogen are present as zinc halogenide (ZnI_2 , Col. 3, lines 42-43) in an amount greater than further halogenides (amount of ZnI_2 is greater than the amounts of the other halogenides or halides that are present in the fill, Col. 3, lines 37-45). It should be noted that since the lamp contains ZnI_2 , then it is sufficient to conclude that free zinc and free iodine in their elemental forms must be present within the lamp.

Regarding Claim 2, English teaches that the halogen is iodine and the zinc halogenide is the zinc iodide (ZnI_2 , Col. 3, lines 42-43).

Regarding Claim 6, English teaches that a coupling-in of energy takes place by means of metal electrodes (9, 11, pair of electrodes, Fig. 1).

Regarding Claim 8, English teaches that a lamp tube including quartz, aluminum oxide, or yttrium-aluminum garnet (5, "fused silica," Col. 2, lines 59-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over English et al (US 4766348) in view of Hadeishi et al (US 4941743) as previously cited.

Regarding Claim 5, English teaches the invention set forth above (see rejection in Claim 1 above). English fails to teach that the in coupling of energy takes place by means without electrodes in the microwave range.

In the same field of endeavor of discharge lamps, Hadeishi teaches that the discharge lamp is in the microwave range (Col. 3, lines 36-38) provided with (electrodes 32, 34; Fig. 1) or without electrodes (EDL, Col. 1, lines 6-16; Col. 1, lines 30-34), thus exemplifying recognized equivalent materials of the lamp in the art. Hadeishi teaches the suitability of using a discharge lamp being provided with or without electrodes in order to ensure high stability and long life (Col. 1, lines 30-34). Hadeishi further teaches the likes of a lamp that comprises two electrodes 32, 34 having the characteristics of an electrodeless discharge lamp, thereby integrating the concepts of an electrodeless lamp with that of a discharge lamp that already occupies two opposing electrodes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the discharge lamp of English as electrodeless instead of with two opposing electrodes, since the selection of any of these known equivalents would be considered within the level of ordinary skill in the art as evidenced by Hadeishi's teaching.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over English et al (US 4766348) in view of Caruso et al (US 4742268) as previously cited.

Regarding Claim 7, English teaches the invention set forth above (see rejection in Claim 1 above). English fails to teach the addition of calcium halide, with the overall amount of calcium being at least 1 nmol/cm³.

In the same field of endeavor, Caruso teaches a metal halide lamp comprising a calcium halide (CaI₂, Col. 4, lines 43-51), with the overall amount of calcium being at least 1 nmol/cm³ (5.48 p.mol/cm³) for the purposes of ensuring low minimum

perceptible color differences and a high color preference index (Col. 4, lines 60-64). Caruso teaches the benefit of an addition of calcium by teaching the incremental increase of the calcium iodide concentration tested in a controlled experiment (see at least Table 1). Filling compositions Additive A and Additive B are compared, their difference lying in the amount of calcium iodide increases while the composition of the fill remainder is held constant. Caruso does this to exhibit the benefits demonstrated when the amount of calcium iodide is increased from 5.5 mg to 6.6 mg of CaI_2 .

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the calcium iodide, as disclosed by Caruso, in the discharge lamp of English in order to/for providing ensure low minimum perceptible color differences and a high color preference index.

Allowable Subject Matter

A. Claim(s) 3-4 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches a high-pressure metal halide discharge lamp comprising a filling, wherein the filling includes zinc, a halogen and a rare gas, wherein at least a portion of the zinc and at least a portion of the halogen are present as zinc halogenide in an amount greater than further halogenides, wherein an overall amount of the zinc is more than $1 \mu\text{mole}/\text{cm}^3$, and the zinc/halogen molar ratio is greater than 0.5.

However, the prior art of record neither shows nor suggests a motivation for an overall amount of the halogen being between 1 and 30 $\mu\text{mole}/\text{cm}^3$ as set forth in Claim 4.

Claim(s) 4 are allowable because of their dependency status from claim 3.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Pat. No. 5013968 to Russell et al.

Pat. No. 6483241 to Stockwald.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana A. Sanei whose telephone number is (571)-272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*/ Hana A. Sanei /
Examiner*

*/Joseph L. Williams/
Primary Examiner, Art Unit 2889*